

Attachment K
Vector Attraction Reduction

Alternative 1 - (503.33(b)(1))

The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - (503.33(b)(2))

When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

Alternative 3 - (503.33(b)(3))

When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

Alternative 4 - (503.33(b)(4))

The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - (503.33(b)(5))

Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - (503.33(b)(6))

The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

Alternative 7 - (503.33(b)(7))

The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.

Alternative 8 - (503.33(b)(8))

The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

Alternative 9 - (503.33(b)(9))

- (a) Sewage sludge shall be injected below the surface of the land.
- (b) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

Alternative 10 - (503.33(b)(10))

Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

Alternative 11 - (503.33(b)(11))

Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.